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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,807	01/13/2004	John L. Schantz	200310109-1	5415

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FORT COLLINS, CO 80527-2400

EXAMINER

PARK, JUNG H

ART UNIT	PAPER NUMBER
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2616

MAIL DATE	DELIVERY MODE
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08/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/757,807

Applicant(s)

SCHANTZ, JOHN L.

Examiner

Jung Park

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Drawings Objections

1. The drawings are objected to because drawing elements in Figure 1 need descriptive text label. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The examiner also suggests submitting new corrected formal drawings for Figures 1-6 in compliance with 37 CFR.

Appropriate correction required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-7 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - a. In claims 1 and 9, what is mean by "a single SS7 point code"?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott et al. (US 2004/0022237, "Elliott") in view of Dantu et al. (US 7006433, "Dantu").

Regarding claim 1, Elliott discloses an arrangement for coupling a SCP (Signaling Control Point) to signaling transfer point (STP) nodes of a SS7 network, comprising:

- an aggregated signaling gateway arrangement (ASGA) (network arrangement, see 104 fig.5A) including at least a first signaling gateway (SS7 gateway, see 208 fig.5A) and a second signaling gateway (SS7 gateway, see 210 fig.5A), the first signaling gateway being coupled between the SCP (SCP, see 214 fig.2A) and a first STP node (STP, see 250 fig.2A) of the SS7 network (fig.2A), the second signaling gateway being coupled between the SCP (SCP, see 214 fig.2A) and a second STP node (STP, see 252 fig.2A) of the SS7 network.

Elliott does not explicitly disclose, "the first signaling gateway and the second gateway being associated with a single SS7 point code". However, Elliott discloses that Soft switch has a point code and an alternate code (see 114 & 529 fig.5A; ¶.608, ln.12-15) and it is not required to have an alternative code point when the communication network system has reliability. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply only a single Soft Switch point

code, i.e., a single SS7 point code corresponding to a single Soft Switch point code, in order to have benefits from economies of scale by requiring less interconnection link.

Regarding claim 2, Elliott discloses voice-over-IP network using SS7 gateway (fig.2A and ¶.451), but lacks what Dantu discloses, "wherein the first signaling gateway and the second signaling gateway communicate with the SCP using SS7-over-IP (SS7-over-IP, see col.2, ln.32-60)." Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply Stream Control Transmission Protocol (SCTP) for transmitting SS7 signaling message across the network elements, i.e., SS7-over-IP, taught by Dantu into the network of Elliott in order to provide high reliability and high availability network (see col.2, ln.32-60).

Regarding claim 3, Elliott discloses, "wherein the first signaling gateway communicates with the first STP node using HSL (High Speed Link) (high speed packet switch, see ¶.645)."

Regarding claim 4, Elliott discloses, "wherein all communication links employed for transmitting SS7 messages between the first STP node and the SCP traverse the first signaling gateway (fig.2A and ¶.522, table 1)."

Regarding claim 5, Elliott discloses the 84 HSL links (¶.645), but does not explicitly disclose, "wherein the ASGA is capable of providing 32 HSL links of bandwidth into the SS7 network." However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply 32 HSL links of bandwidth in order to

provide more flexibility according to network designer's need and such a modification would only require a simple change of existing links.

Regarding claim 6, it is a claim corresponding to claim 4 and is therefore rejected for the similar reasons set forth in the rejection of claim 4.

Regarding claim 7, Elliott lacks what Dantu discloses, "wherein each SS7 link between the SCP and the ASGA is mapped onto a SCTP (Stream Control Transport Protocol) connection (col.2, ln.38-41)." This claim is rejected for the same reasons and motivation set forth in the rejection of claim 2.

Regarding claim 8, it is a claim corresponding to claims 1 & 2 except the limitation of "an application server (a special application computer, see 214 fig.2A and ¶.11)" and is therefore rejected for the similar reasons set forth in the rejection of claims 1 and 2.

Regarding claim 9, Elliott discloses, "wherein the first signaling gateway and the second gateway are associated with a single SS7 point code (a single point code of a single SCP or Soft Switch associated with the first and second gateway, see 214 and 204 fig.2A)."

Regarding claims 10-13, they are claims corresponding to claims 5, 3, 6, and 7, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 14, Elliott discloses that Digital PBX provides 24 digital channels at 56K per DS0, but does not explicitly disclose, "wherein the second signaling gateway communicates with the second STP node using 56 Kbits/second SS7 links." However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply 56 Kbps SS7 links between the second signaling gateway and the second STP node to access Public Switched Telephone Network (PSTN) in order to provide more flexibility according to network designer's need and utilize the existed equipments to save cost and provide same service to current customers who satisfy with the low speed network equipments.

Regarding claim 15, it is a claim corresponding to claims 1 & 2 and is therefore rejected for the similar reasons set forth in the rejection of claims 1 and 2.

Regarding claims 16, 18, 19, 20, 21, & 22, they are claims corresponding to claims 9, 3, 6, 7, 3, & 14, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 17, Elliott lacks what Dantu discloses, "wherein the ASGA is capable of providing a greater bandwidth throughput into the SS7 network than a maximum bandwidth throughput into the SS7 network of either one of the first signaling gateway and the second signaling gateway (not disrupt or degrade the capabilities of the signaling network, see col.2, ln.40-43). This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 23, Elliott discloses the backup call path (¶.1495), but does not explicitly disclose, "wherein the first signaling gateway is coupled to the first STP node via at least one active HSL link and at least one inactive 56 Kbits/second link." That is, there is a need to have a backup-signaling link for high-speed links for preventing network failure as taught by Elliott. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include one active HSL link for data transfer and at least one inactive link as a backup link. The motivation of using one inactive low speed link as a backup link is to save cost by using one of low speed links by utilizing the existed old link only for signaling.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

Art Unit: 2616

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP

Jung Park
Patent Examiner

A handwritten signature in black ink, appearing to read "Chau Nguyen", written in a cursive style.

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600